Laboratory Validation of Technologies for the Eclipse Coronagraphic Telescope

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Predictions of contrast performance for the Eclipse coronagraphic telescope are based on computational models that have been tested and validated with laboratory experience. We review recent developments in the key technologies for an actively corrected space telescope designed for extremely high-contrast imaging of nearby planetary systems, including apodized coronagraphic masks, precision deformable mirrors, and coronagraphic algorithms for wavefront sensing and correction, as integrated in the High Contrast Imaging Testbed at JPL.